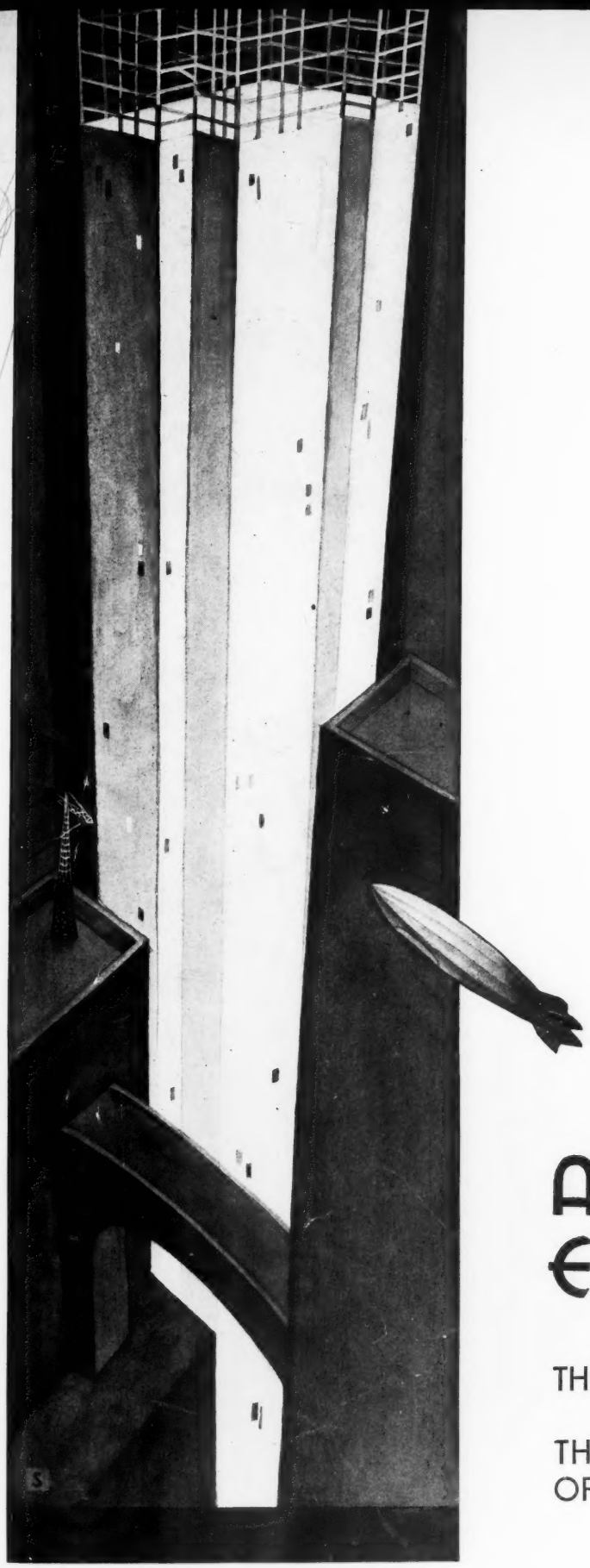

The AMERICAN ENGINEER

OFFICIAL PUBLICATION
THE NEW YORK STATE SOCIETY
AND
THE NEW JERSEY ASSOCIATION
OF PROFESSIONAL ENGINEERS

AUGUST + + 1932

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OF

THE NEW YORK STATE SOCIETY AND THE NEW JERSEY ASSOCIATION OF PROFESSIONAL ENGINEERS

12 FIRST STREET, SAUGERTIES, N. Y.

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Arthur V. Sheridan, Editor

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NUMBER 8 AUGUST, 1932

CONVENTION OF STATE ENGINEERING BOARDS

All Engineers Asked To Participate

ON September 29th and 30th and October 1st, there will take place, in New York, the 13th annual convention of the National Council of State Boards of Engineering Examiners. The deliberations, which will be attended by the legally chosen representatives of the profession from twenty-five states, as well as by delegated observers from various engineering societies, will be held at the Hotel Pennsylvania and will be open to the public.

The National Council has never convened in New York, largely for the reason that it was not until two years ago that the State Department of Education authorized the New York Board to affiliate itself with the Council. That such affiliation has redounded greatly to the benefit of all concerned, and especially New York, there is little doubt. Within that time there have been established model examinations and requirements for applicants, standards for schools, procedure for future engineers and a certificate of qualification which, upon the payment of a stipulated fee, will undoubtedly be recognized by every State Board as prima facie evidence of fitness for a license in that state. These are accomplishments which could not have been brought about by any other means in ten times two years. The National Council is today unquestionably the most potent single influence with which the profession must concern itself. The opposition or support of the Examining Board is a determining factor in the legislative proposals of the profession within any state, and the promotion of good will and friendly relations between the profession and its legal representatives is a sine qua non for the welfare of both.

Almost every problem which has come before the profession during the past decade will be the subject of discussion, explanation and recommendation during the three days of the convention. Practically all of the deliberations will be open and, subject to certain regulations, all courtesies and privileges will be extended to those who attend. No better opportunity, especially for engineering schools and engineering societies, to learn the views and opinions prevalent throughout the country, as well as to offer their own, could possibly be afforded. Every group interested in the profession should participate in this convention. More than half the licensed engineers of this country reside or practice within the States of New York and New Jersey and, with such numbers to draw from, these two States should avail themselves of the opportunity to impress the Council with their views, so many of which have been born of conditions that other states have not as yet experienced.

As a co-operating quasi-public organization concerned with the enactment and enforcement of the legislation under which the Board functions in this State, and as a courtesy to the distinguished engineer who presides over both the National Council and the New York State Society of Professional Engineers, the privilege of preparing for the coming convention has been entrusted to the latter society. Your Editor has been designated, together with Mr. T. Keith Legare of South Carolina, a past president and incumbent secretary of the National Council, who has for years been one of the most ardent and capable advocates of the cause of professional engineering, to arrange the details incident to New York's reception of the distinguished group that will be a real cross section of the profession in this country.

The convention, in coming to New York, has paid a compliment to Dr. Steinman and to the other members of the New York State Board. Such a compliment is a tribute to the profession of this State and in recognition thereof every society and every chapter should prepare now and arrange to be officially represented during the convention, especially at the dinner dance, where distinguished personages outside the profession will set forth opinions of interest to every engineer, not alone of this State, but of the entire nation.

All engineering societies located in the vicinity of New York have been invited to participate, either directly or through their local sections, in the activities of the coming convention and it is hoped that the profession in this and neighboring States will respond to the occasion as only the Metropolitan Area can.

PROTECTION OF THE TERM "ENGINEER"

Why Our Professional Designation Should Be Restricted

By D. B. STEINMAN,

Chairman, National Council of State Boards of Engineering Examiners
President, N. Y. State Society of Professional Engineers
Past President, American Association of Engineers

THIS is an appeal to all members and friends of the Engineering Profession to recognize the importance of protecting the designation "Engineer" against misappropriation, and to give thought and effort to the practical problem of accomplishing this objective. The present article is an attempt to outline the necessity for such program, and subsequent articles in this series will deal with ways and means of carrying the program effectively forward.

The individual Engineer has invested many years of his life in professional education and arduous professional training in order to qualify as an "Engineer." The Profession is investing decades of united effort to win public recognition and esteem for those who bear the title "Engineer." All of this investment is largely nullified if the use of the term "Engineer" is left unprotected.

So long as the plumber, the radio mechanic, the insurance agent, the truckman, the fumigator, and others may freely appropriate the designation "Engineer," the effort to secure unique public appreciation of the Engineer is thwarted.

The dignity and respect that rightfully belong to the designation of a learned profession cannot be maintained when that designation is abused by indiscriminate misappropriation.

No other learned profession tolerates the unauthorized appropriation of its professional designation.

So long as any non-engineer may with impunity call himself an "Engineer," prefixing any random adjective (such as efficiency, domestic, sales, social, exterminating, amusement, radio, plumbing, real estate, decorating, etc.), the ignorant and the prejudiced will retain an excuse to charge that Engineering is not a profession but merely a heterogeneous agglomeration of nondescript specialties. The term "Engineer" becomes meaningless, or an object of ridicule rather than of respect.

The public judges a profession by the examples it meets. When the public sees men who are unlettered and untrained holding themselves out as "Engineers," respect for the engineering profession is weakened or destroyed. When the public sees the word "Engineer" on the shop window of a plumber, an electrician, a radio dealer, or an automobile mechanic, a wrong picture of the engineering profession is implanted.

Through abuse and misappropriation, the term "Engineer" has been so weakened that many do not distinguish between a mechanic and an Engineer. Many self-styled "Automotive Engineers" are little more than automobile mechanics, and but few who adopt the designation "Heating Engineer" know anything of engineering. A corporation manufacturing radio equipment, wishing to flatter its dealers and service men, has advertised them as "Radio Service Engineers." Few so-called "Radio Engineers," "Refrigerating Engineers," "Ventilating Engineers," "Welding Engineers," etc., are really Engineers. So long as these technicians and mechanics can freely adopt the engineering designation, the general public has no way of making the distinction.

The profession has suffered in prestige and public confidence from the multiplicity of cults, fads, and quacks operating under the engineering title. Self-styled "Efficiency Engineers," "Social Engineers," "Investment Engineers," "Personnel Engineers," "Human Engineers" and the like have pressed their services upon a non-discriminating public; and when the accomplishments of these pseudo-engineers have failed to measure up to their self-salesmanship, lasting prejudices against "Engineers" have been created.

A firm of interior decorators in New York was found advertising as "Furnishing and Decorating Engineers." When challenged by the writer, they explained that they had previously used the description "Furnishing and Decorating Architects"; but the architectural profession had objected, whereupon the firm had changed the term to "Engineers," since they "did not imagine that the engineering profession would mind."

Many adopt the designation "Engineer" because the term has acquired the popular connotation of "Expert" or "Specialist." These offenders, as a rule have no conception of what Engineering really is.

A non-engineer of psychological bent, who specializes in adjusting marital relations, is listed as a "Consulting Engineer." A lady who specializes in advising housewives how to arrange their kitchens styles herself a "Domestic Planning Engineer." Hundreds of such instances of abuse of the term "Engineer" may be cited. We may regard such trespasses as an implied compliment to the connotation of the title "Engineer," but we would rather thank the offenders for the intended compliment and be relieved of the trespass. Our wagon may look attractive to these hosts of uninvited "hitch-hikers," but they render impossible any real progress toward our goal.

The small contractor who wishes to imply to the prospective home builder that professional services may be dispensed with, styles himself "Engineer and Contractor." An equipment dealer who wishes to create the impression that his salesmen are Engineers competent to give professional advice supplies his men with business cards bearing

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A PROPHECY RECALLED

The Man Who Can Do Will Replace The Man Who Owns

SOME years ago the New York Globe, since absorbed by the Telegram, published an editorial entitled "The Engineer" which is today worth recalling. This editorial, copyrighted by the author in 1916, points the way toward the concept of a rational political economy that is slowly but surely emerging from the morass into which society has been led by the social and financial theories of the past century, which, to the detriment of mankind, are still being labelled science by those who confuse human opinions with natural laws.

"THE ENGINEER"

The man of the future will be the engineer.

He is the man who can Do things; and is better than the man who Owns things.

The Millionaire is a temporary, passing, makeshift product of civilization. He is merely holding things together until the people get sense enough to do their own owning.

Some day little boys will read that the world once had millionaires and huge private units, just as they will one day read and wonder that men once had kings.

But the official who will forever be indispensable is the engineer.

The time will come when the President of the United States will be chosen as the man who has the greatest talent and skill in organizing public works. There will be no more politics in his selection than there is now in choosing the master mechanic of a railway or factory.

When a nation goes to war nowadays, that is, when it becomes necessary to exert its supreme collective strength, nobody dreams of electing the most popular politician or the cleverest speechmaker to lead the armies. It is the man who can get the last ounce of efficiency out of men and metal that is wanted.

Some day the nation will realize that it is continually in a crisis, and that in peace as in war we need the highest order of efficiency and organization.

We need the Engineer to arrange the transportation of people and goods from place to place, without waste, without competition, without graft, looking only to the public good.

We need the Engineer to get meat, bread, and milk from farm to citizen, without the present inefficient tangle of trusts and middlemen working at cross purposes.

We need the Engineer to turn the profit of public enterprise toward building good roads and bridges, instead of enriching a few shrewd manipulators.

We need the Engineer to manage a city as economically and smoothly as if it were a manufacturing plant.

We need the Engineer to organize the farmers so that all can work together for each and their products marketed without being preyed upon at every step of the way from farm to household.

Wealth can be taken away from us. But the power to Do things cannot be taken away.

The Millionaires could go and not be missed. The Engineers we cannot spare.

"What availeth all the wealth?" said the ancient philosopher. "He that hath better iron than thou will come and take away all thy gold."

Says H. L. Gantt:

"The man who knows what to do and how to do it is pre-eminently the engineer. The new world which is being ushered in by the great struggle now taking place is one in which the engineer is destined to be the supreme power, for it is becoming clear that, in future, the man WHO OWNS THINGS will not be as important a factor in the world as the man WHO CAN DO THINGS."

The above argument is from the pen, not of an engineer, but of an author, lecturer, and widely known publicist, Dr. Frank Crane. Whilst suggesting an oligarchy, which might eventually become as obnoxious as the financial one of the past century, the relative importance of the engineer and the financier has seldom, if ever, been more climactically set forth.

Political economy which refuses to recognize that "The Man Who Owns Things" is of far less importance to civilization than "The Man Who Can Do Things," is predicated upon unsound premises and cannot endure. There is little doubt that less than a generation will elapse before the world as a whole will have cast into discard the system that makes possible starvation in the midst of a superabundance of the necessities of life.

No order ever devised by man can be made to apply with equal benefit to all, but whether it be in government, commerce, or any other human endeavor the time comes when its imperfections develop into abuses and evils that become intolerable to the great masses of mankind and a change, in fact almost any proposal, appears desirable to those in distress. It is only because of the blindness of the self-styled intelligentsia that social and economic upheavals take place. Inability to appreciate that puerile attempts at logic and hollow appeals to courage will neither alleviate misery nor satisfy hunger, has brought about every new social order the world has experienced. Yet in spite of the repetitious warnings of history those who would continue the system which has served them well personally never seem to learn and in every age continue ignorant of the significance of "Mene, mene, tekel, upharsin."

To such people he who pleads for reflection is but little less than traitor. Though he be the most ardent disciple of the existing order he is termed a radical. The fact that he would preserve what prevails by pointing out, ere it is too late, the evils and abuses which have attached themselves to the system, is of no consequence and he is characterized

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RUSSIA REVIEWED BY AN ENGINEER

Frederic R. Harris,

Rear Admiral, U. S. N., Retired Director New York State Society of Professional Engineers

THOSE of us who stop to think, have a conception of an ideal social and economic system, embraced in the government of an ideal state, where the citizens will be completely happy, work in common with equal effort, efficiency and ability, all in the interests of the State from which they derive equal benefits in opportunity and equitable distribution of wealth.

Over 2,000 years ago, the great Greek philosopher, Plato, dreamed and wrote of such a condition, and since then many have thought and written upon the same subject. We all feel that somehow and someway things ought to work out so that all babies would have milk, food, warmth and protection, and old people would have a secure, happy old age—all men and women would have: employment and occupations suitable to their abilities and inclinations; security, recreation, contentment and happiness; and every now and then in the world's history, revolution against the established order seeks to secure by a violent upheaval this ideal and with it a flood of documents and declarations, such as our own Declaration of Independence, or on the other side of the Atlantic, the writings of Rousseau and Voltaire, and many others of the period of the French Revolution.

However, when we attempt—as a collection of human beings—to secure for ourselves such an ideal regulation of human affairs we find it indeed a veritable Utopia, unattainable because we have to reckon with the shortcomings, imperfections and selfishness of human nature. It is unnecessary to go into the philosophy of selfishness, because we all know that our acts are explainable on the ground of "self-interest" and that the general good in a purely ideal way will only come to us when we have developed and progressed socially to the point that each individual conceives and is convinced that the general good is the same as his individual good and that shrewdness, evasion and trickery will not succeed in giving him, personally, any advantage that does not come through the general good. We are, of course, a long way from this development of an ideal human civilization which will not come to the human families of this earth until the return of The Messiah and Judgment Day. Having said all this, it is desirable to spend a few moments first in examining the social and economic organization inherent to our own Government, after which one can consider the Marxian experiment begun in Russia some ten or twelve years ago, tracing what has happened there in the attempt to apply this idea to the citizenry of the Soviet Republic.

Our own system, that of a Republic, is based upon government by the people themselves in their own interest. It traces its origin and development from the English system, modified, however, by the philosophy of natural rights, growing out of the French Revolution. It retains personal property as sacred as life and liberty, and in general, while the term is a new one, it is a "Capitalistic System." Such a system is a very ancient one, deeply rooted in the days of prehistory. Wealth or capital (in theory, at least) originates from the excess of production over what is consumed. Therefore, capital or wealth increases when production is efficiently speeded up by ingenuity and industry, and when consumption or waste is decreased by frugality and self-denial. To state the matter simply: If a man, by industry and application, produces or earns $5,000 a year and by economy and self-denial only spends $2,000 a year, his reward for the qualities displayed by him in that he has acquired at the end of the year $3,000 which is "Capital." The incentive offered to him to cultivate these qualities which are good, not alone for him, but for the community and society at large, is represented in the "Capital" of $3,000. For this to be an incentive, he must be assured that he can retain at least a major portion of the fruits of his endeavor—failure to so assure him will destroy this incentive. There is little use in stressing further the employment of this $3,000 and its growth by what is known as "interest" and "profits"—nor is there time to examine self-interest and show that to broaden the incentive feature the earned reward must not alone be secured to the individual, but also to those near and dear to him and for whose happiness and security he feels he is responsible, so explaining the necessity of the right to transmit by will or gift. It is enough to say that experience through the ages has definitely proven one thing: that effort, industry and ingenuity, together with frugality and self-sacrifice, are only secured by a definite reward.

Communistic or group ownership is similarly not a modern development. Clan and tribal holdings in a community are, undoubtedly, as ancient or more ancient than that of individual ownership. In most cases, the two ideas have lived side by side. In the most primitive savage tribe in Africa, or in American before the days of Columbus, certain types of private property produced by the individual were his to keep or give away, while the hunting lands, the game or the crops were the community property. It appears that in most cases the efficient successful hunter might be given first choice, but usually he was sufficiently rewarded and the incentive was enough if he had, among the tribe respect, goodwill, and the title of "Great Hunter." I think there are very few who will not admit that the development of what we know of civilization has, in spite of temporary set-backs advanced and improved and with it a recognition of our dependencies on one another, but we have not yet reached a social development where we can dispense with the stim-

ulus to self-interest inherent in Capitalism. Pure communism, while not totally disregarding this, assumes that regulation, government supervision, and a certain amount of mandatory righteousness and self-satisfaction can replace the material rewards that the capitalistic system offers the individual. In theory, at least, it offers the huge mass of people, all below the average in industry, ability or frugality, the temptation of dividing up the surplus that may be produced by the small minority who are ingenious, industrious and careful, completely overlooking the fact that the huge majority expecting or hoping to get an unearned increment will be slowed down in their efforts to produce even what they normally would, and the small minority, being deprived of the fruits of their efforts, will not to the same extent invent, devise, achieve and produce.

Russia, up to the period of the Revolution, was, undoubtedly, the most backward of all European countries. Besides being an absolute monarchy, it maintained an aristocracy in which a very small percentage of the population was the privileged class. The doors of opportunity were practically closed to 90 per cent of the population. It must be remembered that of this 90 per cent many of them still recalled the days of serfdom when they were attached to the land, and that while this had been abolished by Czar Alexander, actually the idea of the peasants being attached to the landed estates still held sway.

The confiscation of personal property has practically stopped in Russia. One owns pots and pans, clothing, household furniture, what he may still have in the way of trinkets, ornaments, pictures and so on. The government owns everything else, but owns it as the stockholder or bondholder would. There are innumerable companies or corporations which are called "trusts" who own hotels, dry goods stores, and so on. These have their Boards of Directors and their Managers. They keep books; have accounts at the Government banks; borrow money and pay interest, and in that way, they resemble American corporations, but there are no private or individual stockholders. All the stock is owned by the Government and all the profit—if there be any profit—goes to the Government, or if there is a loss, the Government takes this, in which case the Managers and Directors find themselves in trouble. The Manager who succeeds in making good is promoted to a similar job in another and bigger trust. This is the incentive for making good. Russia started out with the idea of practically equal pay for everyone. I do not know whether, actually, this was ever in force, but in the early days, the differences in pay was very small and the pay, even for the highest government position was 300 rubles a month. The lowest pay was 80 rubles—the ruble being a little over 50 cents. The official rate of exchange is 1.94 rubles to the dollar. Undoubtedly, that had to give way, because incentive was required to make a man work and produce so that now the Russian government pays skilled men and managers 1,000 to 1,500 rubles a month. Government officials are still limited to 300 rubles, but there are other perquisites. Mr. Stalin only gets 300 rubles, but if one could see his summer home 30 kilometers out of Moscow and see him drive back and forth from the Kremlin in his Rolls Royce one would understand that the nominal pay makes little difference; and so it is with other officials. They have the use of government cars; their homes and clothing indicate that the personal incentive has gone into it.

Last Fall the writer went to Russia, via Berlin to Moscow, with three Germans. One of them had been born in Russia and elected to retain his German citizenship. His brother stayed there willingly, or unwillingly, and was a Soviet citizen. He is the manager of a shoe machinery factory. His wife and two daughters work in the factory. They all get paid. He gets 400 rubles a month himself. His German brother told me that he had visited them and, on the whole, they lived comfortably.

I have in my employ, temporarily, a man who was employed by Metrostroy, the subway organization in Moscow. He is on a month's leave. He received 600 rubles a month and some perquisites. He found it comfortable. This, however, is not always so. In crowded Moscow it is not unusual for several persons to occupy a moderate-size room and then for one-half dozen of such groups to use one kitchen stove. Sanitary arrangements are bad, or lacking entirely. A young interpreter for the writer lived in a small room with a recently married Russian couple. They had the bed. He slept on two trunks. There were no partitions or draperies of any sort. No running water. He, however, was better taken care of than his friend who slept in a closet.

All of these variations in compensation and the manner in which people live, official Russia claims, is temporary and that when they get going they will get back to the Communistic idea. In the meantime personal observations during the last two years, indicate that there is a wide difference in pay and a very plain evidence of a new aristocracy or privileged class. One of the men met had been in the Army in Turkestan. He had the Red Star and the Red Flag—decorations for service—two of the highest orders. As a reward, he was in Moscow as a high officer of the secret police. He could get a car at two or three o'clock in the morning to drive one to the hotel and could do many other things, indicating influence and power.

The Russian currency is supposed to be self-contained, in theory, backed up by gold reserve. One cannot bring rubles into Russia, nor take them out. One cannot buy exchange. If foreign money is brought into Russia it can be exchanged for rubles at the official rate of 1.94 and if a receipt is kept these rubles have the purchasing power of 1.94. However, the mass of people who get their rubles by working and earning them—these rubles have an entirely different purchasing power. In Russia two years ago, they were worth from 12 to 15 cents. A few months afterwards an American returning ventured information that indicated they were then worth less, about 10 cents. Last Fall it was estimated they were worth about 4 cents. There is active bootleg trading in rubles in Russia and one can buy paper rubles in Warsaw or Berlin, 20-25 to the dollar, depending on how good he is at bargaining. Then, of course,

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A NATIONAL ASSOCIATION

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A PROPOSED FORM OF NATIONAL ORGANIZATION DESIRABLE FOR MANY REASONS IS SHOWN HEREWITH. ITS OBJECTS AND FUNCTIONS IN NO WAY CONFLICT WITH ANY EXISTING AGENCIES.

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CHAPTERS
NATIONAL ASSOCIATION
ORGANIZATION- COMPOSED OF STATE SOCIETIES OF PROFESSIONAL ENGINEERS. WHERE NO LICENSE LAW EXISTS SOME DEFINITE STANDARD OF QUALIFICATIONS FOR STATE SOCIETY MEMBERSHIP SHALL BE REQUIRED. (THE NATIONAL COUNCIL OF STATE BOARDS HAS ESTABLISHED SUCH A CRITERION).
OBJECTS- TO CO-RELATE STATE SOCIETY ACTIVITIES~ TO SPONSOR ALL NATIONAL LEGISLATION AND ACTIVITIES TO ORGANIZE SOCIETIES IN STATES WHERE NONE EXIST TO PROMOTE UNIFORMITY IN EDUCATION, LICENSE LAWS AND ENGINEERING PRACTICE.
ADMINISTRATION- OFFICERS AND BOARD OF DIRECTORS~ LATTER TO HAVE AT LEAST ONE REPRESENTATIVE FROM EACH STATE SOCIETY. (IF DIRECTORS BOARD PROVED UNWIELDY, A BOARD OF MANAGERS WITH EXECUTIVE POWERS COULD BE CHOSEN AND THE BOARD OF DIRECTORS MADE AN ADVISORY BODY)
FUNCTIONS- TO DIRECT ACTIVITIES OF STATE SOCIETIES; BUT NOT TO COMPEL ANY ACTION OR FORCE ANY POLICY UPON A STATE SOCIETY CONTRARY TO THE WISHES OF THAT ORGANIZATION~ THE STATE SOCIETY TO RETAIN ALL POWERS OF AUTONOMY.
SUPPORT- STATE SOCIETIES TO CONTRIBUTE A PER CAPITA TAX BASED UPON THEIR MEMBERSHIP.
STATE SOCIETIES
ORGANIZATION- COMPOSED OF COUNTY CHAPTERS.
MEMBERSHIP- TO BE THROUGH CHAPTERS ONLY EXCEPT WHERE NO CHAPTER EXISTS.
OBJECTS- TO CO-ORDINATE COUNTY CHAPTER ACTIVITIES ~ TO SPONSOR ALL STATE WIDE LEGISLATION AND ACTIVITIES ~ TO ORGANIZE CHAPTERS WHERE NONE EXIST ~ TO PROMOTE UNIFORMITY IN EDUCATION, MUNICIPAL ORDINANCES AND ENGINEERING PRACTICE ~ TO ENFORCE LAWS ~ TO RESTRICT THE USE OF THE TERM ENGINEER ~ TO EDUCATE THE PUBLIC CONCERNING THE ENGINEER ~ TO TAKE AN ACTIVE INTEREST IN PUBLIC AFFAIRS ~ TO ESTABLISH AND ENFORCE CODES OF ETHICS AND PRACTICE
ADMINISTRATION- OFFICERS AND BOARD OF DIRECTORS~ LATTER TO HAVE AT LEAST ONE REPRESENTATIVE FROM EACH CHAPTER. (IF DIRECTORS BOARD PROVED UNWIELDY, A BOARD OF MANAGERS WITH EXECUTIVE POWERS COULD BE CHOSEN AND THE BOARD OF DIRECTORS MADE AN ADVISORY BODY.)
FUNCTIONS- TO DIRECT ACTIVITIES OF COUNTY CHAPTERS~ TO FORMULATE PLANS AND PROGRAMS ~ TO AID AND ADVISE CHAPTERS AND CHAPTER COMMITTEES.
SUPPORT- CHAPTERS TO CONTRIBUTE PER CAPITA TAX BASED ON THEIR MEMBERSHIP ~ SAID TAX TO BE SUFFICIENT TO CONDUCT THE STATE SOCIETY AFTER NATIONAL ASSOCIATION TAX DEDUCTION HAS BEEN MADE.
COUNTY CHAPTERS
ORGANIZATION- COMPOSED OF INDIVIDUAL MEMBERS.
MEMBERSHIP- ALL LICENSED PROFESSIONAL ENGINEERS ARE ELIGIBLE ~ ADMISSION TO CHAPTER TO REST WITH CHAPTER.
OBJECTS - TO SPONSOR ALL LOCAL LEGISLATION AND ACTIVITIES ~ TO PROMOTE FRIENDLY RELATIONS WITH OTHER PROFESSIONAL GROUPS ~ TO PLAY AN ACTIVE PART IN ALL CIVIC AND PUBLIC MATTERS WHEREIN THE ENGINEER AND ENGINEERING ARE CONCERNED ~ TO EDUCATE THE PUBLIC CONCERNING THE ENGINEER ~ TO ENFORCE LAWS AND ORDINANCES ~ TO AMPLIFY CODES OF ETHICS AND PRACTICE ESTABLISHED BY THE STATE SOCIETY AND TO ENFORCE THE SAME ~ TO RESTRICT THE USE OF THE TERM ENGINEER ~ TO CO-OPERATE WITH OTHER CHAPTERS ~ NOT TO SPONSOR LEGISLATION OF A STATE WIDE CHARACTER.
ADMINISTRATION- OFFICERS AND BOARD OF DIRECTORS.
SUPPORT- DUES FROM INDIVIDUAL MEMBERSHIP ~ SAME TO BE SUFFICIENT TO CONDUCT THE COUNTY CHAPTER AFTER DEDUCTION OF PER CAPITA TAX TO STATE SOCIETY IS PAID.

NOTE:- MEMBERSHIP TO BE ONE CLASS ONLY. ALL MEMBERS TO BE LICENSED PROFESSIONAL ENGINEERS OR EQUIVALENT AS NOTED ABOVE.

THE LICENSE LAW SINCE 1920

By Roy G. Finch, Secretary—Engineers' Board of Examiners

(Continued from Previous Issue)

Examinations: May be required. Section 1457.	**Examinations:** Same as for P. E. Section 1457.	**Examinations:** Same as for P. E., except that applicant is not required to pass an examination on planning, structural design and supervision of construction of buildings and similar structures. Section 1452.
No provision.	Upon recommendation of the board, the department may waive requirements for examination in the case of an applicant (1) who has practiced lawfully for more than 12 years; (2) who was actively engaged in the practice of land surveying in this state for at least 4 years prior to May 14, 1920; or (3) who is a member of a national engineering society of a grade and character satisfactory to the board. Section 1457.	No change in (1) and (2). For (3), no provision. Section 1452.
No provision.	If an applicant fails in his first examination, he may be admitted to a second examination without the payment of a second fee. Section 1457.	Wording change slightly, but no change in provision. Section 1452.
Experience: Must have a minimum of 3 years of practical experience satisfactory to the board, each 2 years of study, satisfactorily completed, of engineering in an approved school to be considered the equivalent of 1 year of active experience. Section 1457.	**Experience:** Must have 6 years or more of practical experience of a grade and character satisfactory to the board. Section 1457. Each year of completed study in a registered college or school of engineering may be accepted in lieu of 1 year of experience. Section 1457.	**Experience:** No change. Section 1452.
Prima facie "evidence satisfactory to the board" that applicant is fully qualified to practice.		
At least 4 years of practical experience of a character satisfactory to the board. Section 1457.	No provision.	No provision.
Graduation from an accepted school or college with 4-year course, together with 4 years of practical experience, 1 of which shall have been in responsible charge of work. Section 1457.	No provision.	No provision.
	Licenses.	
Same as for P. E. Section 1461.	Same as for P. E. Section 1458.	Same as for P. E. Section 1453.
	Temporary Permits.	
No Provision.	No provision.	No provision.
	Licenses previously granted.	
Same as for P. S. Section 1461.	Same as for P. E. Section 1461.	Same as for P. E. Section 1450.
	Fees.	
$25.00, except when applicant applies for both P. E. and L. S. when the fee shall be $35.00. Section 1457.	$10.00, with the privilege of making a second application and of admittance to a second examination if applicant fails on first application or examination. Section 1457.	No change. Section 1452.
	THE BOARD.	
Name: State Board of Licensing for Professional Engineers and Land Surveyors. Section 1451.	**Name:** No change. Section 1451	**Name:** State Board of Examiners of Professional Engineers and Land Surveyors. Section 1451.
Function: Not specifically stated but in substance, to recommend to the department the issuance of licenses, pursuant to the provisions of this law. Section 1451.	**Function:** No change. Section 1451.	**Function:** To examine applicants for licenses to practice, pursuant to the provisions of this law. Section 1451.
Membership: Shall consist of 5 members. Section 1451.	**Membership:** No change. Section 1451.	**Membership:** Shall consist of 3 or more members as determined by the regents. Section 1451.
Qualification of Members: Shall be citizens of the U. S. and residents of this state at the time of appointment. Section 1452.	**Qualification of Members:** No change. Section 1452.	**Qualification of Members:** No change. Section 1451.

(Continued on Page 15)

NEW YORK NEWS

IMPORTANT TO SURVEYORS

Opinion of Attorney General

Despite the fact that the question involved was one of conflict between a state law and a local ordinance there existed in the minds of some the belief that the local ordinance should prevail. Officials of the City of New York were recognizing the ordinance instead of the law.

Recently the Attorney General of the State of New York was asked to render an opinion. It is printed herewith.

State of New York
DEPARTMENT OF LAW
Albany

John J. Bennett, Jr.
Attorney General.

June 29th, 1932.

Charles B. Heisler, Director,
Professional Licensure Bureau,
Education Building,
Albany, New York.
Dear Sir:

In reply to your letter of June 11th asking whether or not a land surveyor licensed under Article 55 of the Education Law can engage in private practice in the City of New York without having been duly licensed in accordance with Article 10 of Chapter 2 of the Code of Ordinances of the City of New York, I will say that Chapter 2, Article 10 of the Code of Ordinances has been in force in the City of New York for many years.

It provides for the appointment of an Examining Board of City Surveyors. This board consists of the Chief Engineer of the Board of Estimate, ex officio, two engineers appointed by the Board of Aldermen from the consulting or topographical engineers in the regular employ of the city and two city surveyors appointed by the Board of Aldermen. This board meets at stated intervals and especially when the Board of Aldermen request them to do so. It is their duty to examine all persons who may desire to be appointed surveyors of the city by tests which will determine their competency and fitness. It must, within ten days after the examination, certify to the Board of Aldermen a list in the order of standing of all applicants, who have qualified in such examination. The applicant, before being examined, must pay an examination fee of $5.00.

The article further provides that there shall be as many surveyors for the city as the Board of Aldermen shall from time to time appoint from the certified list. Each city surveyor before entering upon his duties take an oath to well and truly perform the work required of him. No person not a citizen shall be eligible to the appointment as surveyor.

From the above, the only qualifications required to be a city surveyor in the City of New York is to pass the examination given by the Examining Board of City Surveyors, be a citizen and a resident of the City of New York, be appointed by the Board of Aldermen and take an oath that he will well and truly perform the duties of city surveyor.

The first paragraph of Section 1450 of Article 55, as amended by Chapter 468 of the Laws of 1932 provide as follows:

"In order to safeguard life, health and property, any person practicing or offering to practice professional engineering or land surveying in this state shall hereafter be required to submit evidence that he or she is qualified so to practice and shall be licensed as hereinafter provided. It shall be unlawful for any person to practice or to offer to practice professional engineering or land surveying in this state or use the title professional engineer or land surveyor or any title, sign, card or device to indicate that such person is practicing professional engineering or land surveying or is a professional engineer or land surveyor, unless such person has been duly licensed under the provisions of this article."

Subdivision 7 of Section 1449 defines the practice of land surveying as follows:

"A person practices land surveying within the meaning and intent of this article who surveys areas for their correct determination and description, and for conveyancing, or for the establishment or re-establishment of land boundaries and the plotting of lands and subdivisions thereof."

Under section 1452 an applicant for a license as a land surveyor must submit evidence as to the following:

1. Is more than 21 years of age;
2. Is a citizen of the United States or has legally declared his intention of becoming a citizen;
3. Is of good moral character;
4. Has satisfactorily completed an approved four year high school course or the equivalent thereof as determined by the department;
5. Has had six years or more of practical experience in land surveying of a grade and character satisfactory to the board;
6. Has passed the prescribed examinations.

From a reading of the said articles herein, it will be seen that they are inconsistent. Article 55 as amended makes no exception for the City of New York.

I am of the opinion that the legislative intention is clearly manifested to make the act general and applicable to the entire state.

"A general statute will repeal special or local acts without expressly naming them, where they are inconsistent with it, and where it can be seen from the whole enactment that it was the intention of the legislature to sweep away all local peculiarities thus sanctioned by special acts and to establish one uniform system." (Black on Interpretation of Laws, section 153).

"There is no rule of law which prohibits the repeal of a special act by a general one, nor is there any principle forbidding such repeal without the use of words declarative of that intent.

"The question is always one of intention, and the purpose of abrogating a particular enactment by a later general statute is sufficiently manifested when the provisions cannot stand together. (Sutherland on Statutory Construction, section 159. Stt, on this point generally, *Matter of Dobson*, 146 N. Y. 357; *People* v. *Jaehne*, 103 N. Y. 182; *Board of Commissioners of Excise* v. *Burtis*, 103 N. Y. 136)."

The above quotations are from the opinion of Judge Bartlett, *People ex rel. Fleming* v. *Dalton*, 158 N. Y. 175.

I have, therefore, reached the conclusion that the opinion expressed by the Corporation Counsel of the City of New York in his letter dated March 4, 1932, addressed to Dr. Frank P. Graves, State Commissioner of Education is unwarranted.

This, however, is only an informal opinion and not an official opinion of the Attorney-General.

Very truly yours,
JOHN J. BENNETT, Jr.
By: (signed)
MYRON J. PARKINSON
Depty. Asst.

To President Steinman and the State Department of Education is due the credit for obtaining this opinion.

Protection Of The Term "Engineer"

(Continued from Page 4.)

the designation "Sales Engineer." A corporation employing young laboratory assistants dignifies them with the title "Research Engineers" to keep them happy with a high-sounding title in lieu of more adequate compensation. Such instances of misappropriation of the term "Engineer" are deceptions of the public at the expense of the Engineering Profession.

The engineering graduate has devoted years of intensive preliminary and professional study to win the coveted degree of C.E., M.E., or E.E. But the untrained non-engineer has no scruples in appropriating such designations. We find electricians styling themselves "Electrical Engineer," plumbers adopting the title "Sanitary Engineer," and uneducated country surveyors boldly printing "Civil Engineer" after their names. These men simply confer engineering degrees upon themselves without taking the trouble of going to school.

The Engineer knows that he must work many years to show his mettle and attain recognition in the profession before he can presume to style himself "Consulting Engineer." But the unscrupulous non-engineer does not suffer from such inhibitions, and does not hesitate to adopt the high-sounding designation. The New York Telephone Directory lists scores of self-styled "Consulting Engineers" who are not Engineers.

One of the principal arguments for licensing legislation has been that it would enable us to stop the ignorant and unqualified from hanging out their shingles as "Engineers." If this ob-

(Continued on Page 14.)

NEW JERSEY NEWS

From Subscribers and Chapters

"OUR READERS SAY"

There are two matters of especial interest to the Engineers of this State which may appropriately be brought to the attention of the Association members at this time.

A great deal has been said about the necessity of stimulating public works enterprises. We all know that one of the best channels for a return to normalcy or some measure of prosperity, lies through a resumption of activity in the public works field. This has been recognized by the Federal Government and an enormous sum of money placed in President Hoover's hand for distribution to the several States through the Reconstruction Finance Corporation.

A number of States lobbied for the passage of the legislation which created this fund. A number of the States had prepared schedules ready to submit, showing the enterprises on which that State allotment could be spent and the nature of these self-liquidating enterprises. It is doubtful if New Jersey had awakened to its possibilities when the bill was passed. A canvass of the situation among many of the municipalities in the State indicates that no effort has been made by those municipalities to inform the State's administrative officers of their needs or their expectation of participation in a fair share of the Reconstruction Finance Corporation fund. This, it appears, is a reflection, though not a serious one, on the wide-awakeness of the engineers throughout this State. It is not too late, especially for Municipal Engineers, to discover what public works program could be carried on with finances obtained from this source, and the writer requests every engineer who is interested in the public works movement for the assistance of the unemployed, to write to his Senator or Congressman, the State Treasurer or Secretary of the New Jersey State League of Municipalities, and find out what is being done along these lines.

The other matter of interest to the Engineers of the State is the forthcoming convention of the New Jersey State League of Municipalities to be held at Asbury Park on October 6th and 7th, wherein the Public Works Superintendents and Municipal Engineers are to play an important part. This convention is not a closed assembly, but every man in the State who is interested in public works, tax reform, the unemployment problem and kindred matters, is expected and invited to participate.

This year the Association of Municipal Engineers in its session will have the pleasure of hearing Dr. D. B. Steinman, President of the New York State Society, who is scheduled to deliver an illustrated lecture on "Fifty Years of Bridge Building." Dr. Steinman deserves a wide audience and it is hoped that the Engineers of the State will take this convention by storm.

GERALD W. KNIGHT.

MONMOUTH COUNTY CHAPTER

The annual clambake of Monmouth County Chapter will be held Saturday afternoon, September 10th, 1932, at Wilbur Gardner's Log Cabin Inn, Pleasure Bay, N. J. (North of Long Branch). There will be plenty to eat, together with music and dancing. Tickets at $2.50 each, may be had by applying to any member of the committee which consists of the following:

Robert Martin, 125 Branchport Avenue, Long Branch.

James Emlin, 229 Main Street, Avon, N. J.

Otis Seaman, 442 Dewey Street, Long Branch.

Come early and get acquainted with your fellow engineers. Ladies are welcome. Reservations should be made before September 1st, 1932.

LEO K. McKEE,
Secretary-Treasurer.

* * *

MORRIS COUNTY CHAPTER

On June 22, 1932, the Morris County Chapter held its regular meeting at the home of Mr. Walter Conley, its President, in Washington Valley, where a very delightful supper was enjoyed by those present. This occasion ended a series of interesting meetings during the Winter and Spring. The next meeting will be held in September.

Chapter members attention! Many of you have not as yet paid your dues to the State Association. Please do so. You will find a blank on page 20 in the American Engineer for August.

* * *

UNION COUNTY CHAPTER

From the pen of D. C. MacDougall, President, Union County Chapter, comes the following:

I enjoy this opportunity of communicating with my fellow members through the medium of "The American Engineer."

Perhaps you have a thought you would like to send to other engineers of our Chapter. Why not use the magazine for that purpose? Send your message to the Secretary and he will see, if it is appropriate, that it is printed.

Only a short time remains until our first Fall meeting and we are preparing for it now. We ask that you make preparations to come out so as to start the coming year with a goodly number present. We wish to talk over matters for building up Union County Chapter. You have no idea what opportunities there are for getting a new slant on some old problem, or what the exchange of thoughts may bring forth on some new and untried scheme.

There is an old "saw" but it is good, "In union there is strength." Some of us as individuals may be strong and when we put the few strong with the many weak we are helping both the strong and the weak with the union. If you are strong come out and lend your strength to the weak and if you are weak come and lend your mite with other weak ones, and we will present a strong aggregation to meet the problems that may come before us. It may be, they will not all be adjudicated just the way we would want them to be, but, at least, we will have had an opportunity to present our side of the case and we will abide by the rule of the majority.

Just one other item I want to call to your attention. Look on page.... of this issue and you will see the blank for the payment of your annual dues. May I ask you to cut this out, fill in the necessary data and send it, at once, to the Secretary of the State Association?

Remember the old Scotch saying: "Mauny Muckle, mak a muckle."

* * *

PASSAIC COUNTY CHAPTER

The regular June meeting and annual election of officers of Passaic County Chapter were held at the Elks Club, corner of Howe Avenue and Garden Street, Passaic, N. J., on June 30, 1932.

The first part of the session was an enjoyable dinner meeting in the private room of the Elks Club Restaurant. Following dinner there was a brief business session during which the following officers were elected for the year 1932-1933:

Chauncey H. Ingalls, President.
Frederic H. Millen, Vice-President.
Ernest F. Weeks, Secretary.
Vincent J. Scanlan, Treasurer.

The spirit of the meeting was notable for its enthusiasm and augurs well for the activities of the Chapter during the coming year. The climax of the occasion was a most interesting and instructive talk, given by Dr. Robert J. Wiseman, Engineer for the Okonite Callender Company of Passaic and a member of our Chapter, describing the steps and methods in the manufacture of insulated electric cable of all sizes from the ordinary house circuit lead to the six-inch submarine conduit.

Our experiences of the past months, during which we have frequently listed members of our own Chapter for the talks to be given at the meetings, have convinced us that the material available in our own district is second to none in the practice of their respective lines of work and in their ability to present the same in an effective manner to their fellow engineers.

Members of the Chapter and others who direct official communications will please note the change of Secretaryship, Ernest F. Weeks, Secretary, 200 East 5th Street, Paterson, N. J.

ERNEST F. WEEKS.

GENERAL NEWS

NEW COASTAL SURVEY

Passing Through New York

The Society is in receipt of a press memorandum from the Department of Commerce regarding the precise control surveys which the Coast and Geodetic Survey is extending along the Atlantic Coast.

Work upon this survey is now being carried on in the metropolitan area under Harold A. Catton, officer in charge of the New York Station.

The importance and requirements of survey work are so often misunderstood that the memorandum is offered as information to be borne in mind when the question of defining surveying comes before those who would enact and interpret legislation.

Through the eastern and southern section of the city, people have no doubt been noticing of late a system of tall steel towers which suddenly appear at certain prominent points, remain in position for a few days and then again disappear. Probably it has been further noticed that the progressive movement of these tall steel towers is toward the south and west —from Long Island Sound toward the coast of New Jersey.

These tall steel towers are employed in connection with extending a new arc of triangulation along the Atlantic Coast this summer. According to R. S. Patton, Director, Coast and Geodetic Survey, this triangulation will extend along the coasts of Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland and Virginia, and will estalish triangulation stations (very accurately placed survey monuments) at approximately ten-mile intervals for the control of coastal charts, the accurate determination of boundary lines and other engineering operations. The work was commenced near Providence, Rhode Island, during May and has now progressed to the general vicinity of New York. It is expected that the arc will be completed to Norfolk, Virginia, by the end of the present season.

At Norfolk, the present triangulation connects with other work extending further south along the Atlantic Coast to the vicinity of Brunswick, Georgia. To carry surveys of a high degree of accuracy over such great distances, it is necessary to employ the method of triangulation which takes into account the spherical shape of the earth. The general scheme is to place a double line of monuments, about 10-15 miles apart, along the route to be surveyed. *Distances and directions* between these monuments are *determined* by *observations with the highest type of scientific instruments.*

Owing to the flat country along the Atlantic Coast as well as frequent high timber and thickly built-up areas, portable steel towers, some erected to a height of 129 feet, are employed to make continuous triangulation stations intervisible. When observations are completed on them, the towers are loaded on trailer trucks and sent forward for erection at new stations.

One of the interesting features of the work is that the main observations are taken at night when atmospheric conditions are much more favorable for accurate work than during the daytime. Special signal lights are displayed from some of the towers while observations are taken at others. Each signal light requires a light keeper to show his light in the different directions as required. The signal lights also provide a means of communication between the various towers and so coordinating the work. Thus at about 3 a. m. a light keeper on Todd Hill, Staten Island, may receive a series of long and short flashes from Rockaway Beach which will tell him that the work for the night is finished and that he can turn in for a well earned rest.

This arc of triangulation is being performed in connection with the Federal government's project of triangulation and leveling authorized by Congress and which will eventually result in the accurate measurement of distance and the placement of bench marks within twenty-five miles of every place in the United States.

While of a highly technical nature, this work is of inestimable value when adjusted into the national triangulation system and the practical dollars and cents benefits of the project to every citizen in every state cannot be over estimated.

The measurements established and the subsequent erection of bench marks, or control stations, furnishes a strong control for city, county, state and federal surveys and maps, for the location of boundary lines of all kinds, the planning of roads—in fact, all purposes where a knowledge of location, distance and direction are needed in engineering projects.

Each triangulation station is marked in a permanent manner with a block of concrete into which is set an inscribed metal tablet. Objects, such as church spires, cupolas, water towers, airway beacons, prominent chimneys, and lighthouses, are located and tied in during the progress of the triangulation work.

* * *

AMERICAN ENGINEERING COUNCIL

Washington, D. C.

The appended letter should be carefully read by all Engineers and its contents noted for future possible action upon the part of the Society.

July 27, 1932.

From: American Engineering Council
To: Engineering and Allied Technical Societies of the United States.
Subject: Hearings Before Congressional Committee to Investigate Government Competition With Private Enterprise.

From time to time there has been a good deal of complaint in engineering circles as to the competition of governmental agencies and employees, federal, state and local, with engineers in private practice. Council has a committee looking into this situation which has been operating about a year but has not submitted a final report.

During the recent session of Congress, a committee was formed and authorized to investigate Government competition with private enterprise. Hon. Joseph B. Shannon, Kansas City, Missouri, chairman of this committee, invited American Engineering Council to submit at the hearings, which were being held two weeks before the adjournment of Congress, such information as Council desired relating to governmental competition with engineers in private practice. In the brief time available Council was able to submit only a general broad statement on the subject.

It is anticipated that these hearings will be continued when Congress convenes in December. In the mean time, during the summer, hearings are being held in various parts of the country. One such hearing has recently taken place in Kansas City, at which Council had a representative appear.

The work of this Congressional committee, it would appear, offers a splendid opportunity for the engineering profession to supply specific authoritative information as to the character and amount of competition on the part of Federal Government agencies to which engineers in private are being subjected. If a real grievance exists, this is the opportune time to express it.

I hope that each one to whom this letter is addressed will give careful consideration to the subject and take such action as, in his judgment, seems wise and helpful, from the standpoint of his organization. We would like to be advised of your attitude and what action you take with respect to this subject. If you desire to know the place and date of the hearings, we shall be happy to inform you thereof as far in advance as possible. It may be that some of these hearings will be held without our being informed in time to notify you. In such instances, publicity in the local papers will undoubtedly give the necessary information.

Very sincerely yours,

L. W. WALLACE
Executive Secretary.

* * *

BRITISH ENGINEERS TO VISIT AMERICA

August 27—September 9

The annual summer meeting of the British Institution of Mechanical Engineers will be held in Canada and the United States from August 27 to September 9, inclusive. Members of the Institution will sail from Southampton, England, on August 19, arrive at Quebec on August 27, and proceed to visit industrial plants, power stations, and other places of interest in Eastern Canada and this country.

The itinerary of the trip includes, universities and plants in Quebec, Montreal, Ottawa, and Toronto, the power stations at Niagara, Falls, the Eastman Kodak works in Rochester, the General Electric plant at Schenectady, and various places of interest in New York city.

AMERICAN SOCIETY OF CIVIL ENGINEERS

Yellowstone Park Convention

The Society meeting held at the famous Yellowstone Park on July 6, 7, and 8th was not alone a successful one but novel occasion. Approximately 250 persons attended.

While full consideration was given to the technical and business matters of the convention, sightseeing and relaxation played a more prominent part than usual.

The fall meeting will take place October 5, 6, 7 and 8th at Atlantic City.

CHAS. WARREN HUNT DIES

Long Secretary of the Society

Secretary Emeritus Chas. Warren Hunt, after a lingering illness, died at the Engineers' Club in New York on July 23rd last.

For more than a quarter of a century Dr. Hunt directed the business of the Society and was a most potent influence in shaping its policies.

* * *

AMERICAN ASSOCIATION OF ENGINEERS

National Convention— Washington, D. C.

Plans for the annual convention to be held at the nation's capital September 26, 27 and 28th are well under way. It is expected that high national executives as well as distinguished engineers from various parts of the country will address the convention.

Amongst the matters to be presented are: the economic situation and proposals for its improvement; the amalgamation of State Societies under the guidance of a national agency; and the awarding of the Clausen Gold Medal.

* * *

SOCIETY MEETING AT BIGWIN

June 27 to July 1st

A small but loyal and enthusiastic group of one hundred and fifty members of the A. S. M. E. with their families made up the attendance of the Bigwin Meeting of the Society at the Bigwin Inn, Lake of Bays, Ontario, Canada, from Monday, June 27, through Friday, July 1. The party arrived in Toronto on Monday morning, June 27, and was greeted by the Ontario Committee under the leadership of S. L. Fear, chairman. Those who wished were given an opportunity to inspect the harbor, and the afternoon was spent in the trip to Bigwin Inn. In the evening at an intimate get-together occasion the members of the Council were introduced to the members of the local committee.

At the Business Session of the Society on Tuesday morning announcement was made that the 1933 Semi-Annual Meeting would be held in Chicago during the week of June 26, 1933, at the time of the Century of Progress. Other technical societies will also hold meetings during the same week and a joint program for one day is being arranged. This week of June 26 follows the week in which the American Association for the Advancement of Science will hold its meeting.

CONNECTICUT MOVEMENT CONTINUED

Cause of Licensing Gathers Momentum

Through the medium of Mr. Willard S. Conlon, City Engineer of Stamford and President of the Connecticut Conference for the Registration of Engineers and Architects; the following correspondence is made public.

LIONS CLUB

Mr. Willard S. Conlon,
City Engineer,
Town Hall,
Stamford, Conn.

Dear Mr. Conlon:

The Stamford Lions Club, of which you are a member, widely endorses the movement being made by your organization in the registration of Engineers and Architects in the State of Connecticut.

At a regular meeting of our Club held on Thursday, June 30, 1932 at the Davenport Hotel, it was regularly moved and seconded that we give you a vote of confidence and that the secretary of the Club, be informed and write to every Lions Club in Connecticut asking them for their co-operation in this matter.

As secretary of the Club, I wish to inform you that I have carried out the wish of your members in writing to the different Clubs in Connecticut, and certainly hope that you will successfully attain your purpose, which I my self whole heartedly endorse.

Very sincerely yours,
THE STAMFORD LONS CLUB
HARRY A. MOEHRING
Secretary.

* * *

LIONS CLUB

Addressed to 35 Lions Clubs
Through the State of
Connecticut.

Dear ————:

A state wide movement has been started by a member of our Club, Mr. Willard S. Conlon, President of the Connecticut Conference for the Registration of Engineers and Architects to enact legislature in Hartford to register and license all Engineers and Architects in the State of Connecticut.

The purpose of this movement is to elevate the profession to a higher plane, to be giving the general public the benefit of securing a person who is known to be absolutely qualified as an Engineer or an Architect. At the same time, it will eliminate those practicing the work of either of the above professions, unless licensed.

As secretary of your Club, it is the earnest desire of the Stamford Lions Club that you read this letter to your members at your next luncheon meeting, and your cooperation in this matter will be very much appreciated.

Lionally yours,
STAMFORD LIONS CLUB
HARRY A. MOEHRING,
Secretary.

The American Engineer again commends Mr. Conlon for his efforts and hopes that the coming legislation session will see the same rewarded.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Officers for 1933 Nominated Committee Presents Report

The nominating committee has made the following recommendations: For President, A. A. Potter; for Vice-Presidents, J. D. Cunningham, H. V. Coes, and C. F. Hirshfeld; for Managers, R. L. Sackett, J. A. Hunter, and Alex D. Bailey.

A. S. M. E. News for July 22nd, contains the following information relevant to the nominee for President

A. A. Potter, nominated for the office of president of the Society for 1932-33, is dean of the Schools of Engineering of Purdue University. Dean Potter was born in Vilna, Russia, where he received his elementary education. Upon coming to the United States he entered Massachusetts Institute of Technology, from which he was graduated in 1903 with the degree of B. S. He received his doctor's degree in engineering from Kansas State College in 1925.

Upon his graduation from M. I. T. he entered the employ of the General Electric Co. during the early stages of the development of the steam turbine. In 1905 he started upon his career as a teacher of engineering with the title of assistant professor of mechanical engineering at Kansas State College, where he was advanced to a full professorship in 1910 and to the position of dean and director of the engineering experiment station of that institution in 1913. Since 1920 Dean Potter has been associated with Purdue University as dean of the schools of engineering director of the engineering experiment station, and professor of power engineering.

From 1924 to 1931 Dean Potter acted in the capacity of advisory editor to Ginn & Co., and 1928 to 1930 as consulting expert to the U. S. Department of the Interior. He was also an associate member of the U. S. Naval Consulting Board from 1917 to 1919 and education director in the War Department during 1918 and 1919. He is a pioneer in personnel work as applied to engineering colleges.

Dean Potter's professional activities in the A. S. M. E. include membership for five years on the Committee on Relations with Colleges; membership for three years on the Main Research Committee; chairmanship of the Indianapolis Section of the Society; A. S. M. E. representative on the Science Advisory Committee in connection with Chicago's World Fair; and also representative for three years on the American Engineering Council.

In 1924-25 Dean Potter was president of the Society for the Promotion of Engineering Education; in 1919 20 president of the Kansas Engineering Society; in 1922-23 president of the Indiana Engineering Society; in 1921-22 vice-president and acting president of the Association of Land-Grant Colleges, and in 1929-30 chairman of the Engineering Section of the Association of Land-Grant Colleges and Universities. Since 1920 he has been a member of large of the Prime Movers Committee of the N. E. L. A.

Dean Potter is an honorary member

of the American Association of University Professors, a fellow of the American Association for the Advancement of Science, and a member of the American Association for the Advancement of Science, and a member of the honorary societies of Tau Beta Pi, Sigma Tau, Phil Kappa Phi, Sigma Xi, and Scabbard and Blade. He is the author of "Farm Motors." "Elements of Steam and Gas Power," "Engineering Thermodynamics," as well as of numerous articles which have been published in Engineering and education magazines.

* * *

MOVIES HAVEN OF MANY ENGINEERS

Telling on Hollywood

By ROBERT GRANDON

The American Engineer is indebted to Joseph F. Lamb, Vice-President of Bronx County Chapter for the following interesting article from the Courier-Express of Buffalo, July 25, 1932.

Hollywood, Cal. July 25—If things go wrong on location one day, there are any number of stars to step into the breech and solve the difficulty . . . providing the difficulty is one of an engineering sort . . . for there are plenty of them who engineer other things beside romance.

Talking with Walter Huston the other day, he recalled the time he served in St. Louis as manager of the Union Electric Light & Power Company's Charles Street plant. ualter had wildcatted in The Defender of Cameron Dam; In Convict Stripes, and The Sign of the Cross. The stage wasn't exactly beckoning them so he quit it to direct work in city water and electric plans in Nevada and Missouri. St. Louis handed him a city engineer's license, which he still shows. But the stage got him; and now the screen.

Director Clarence Brown is an automotive engineer and a darned good one . . . Jack Holt was a civil engineer for a railroad before he went stagie . . . Neal Hart graduated as a civil engineer from Bucknell University, while Olin Francis specialized in engineering at the University of Mississippi . . . Jack (Juvenile) Ponder is a chemical engineer. Learned it at the Universities of Texas and Missouri . . . and the late Louis Wolheim held an M. E. from Cornell after graduating as an engineer.

* * *

TOO MUCH EDUCATION?

A Canadian Viewpoint

From William A. Stubbs, Assistant Secretary of the Society, vacationing in Canada comes an interesting commentary upon a subject which deserves consideration,—"Whither is all the so-called Education Leading America."

WILL EDUCATION BANKRUPT CANADA?

To the Editor of The Mail and Empire:

Sir,—When will governments, the public and financial experts realize that we are steering, and have been for at least two generations, towards unemployment, dissastisfaction, general unrest and financial chaos by reason of our unrelated education? We spend millions every year to bring countless boys and young men to graduation and then have nothing ready to which they can put a willing hand to make a living—even an existence.

I mention the foregoing because this letter was suggested after reading the July number of the Engineering Journal of Canada. I do not wish to minimize the present depression, but is it not a sad commentary on our indifference to our rich inheritance, that 122 graduated engineers of varying ages and years of experience, practically all with decent degrees, should be compelled to advertise individually the fact that they are out of work and "willing to take anything," as shown in the Journal?

Space will not allow me to expatiate on the failure of our financial arrangements to provide a natural field for these men to work in. Briefly, there is no hope of aid from the Government, the banks of "big business."

This brings me to the crux of my complaint. In the same journal there appears a list of some 130 graduates who this year in Canada have successfully passed examinations in Civil and Mechanical Engineering (this does not include Mining, Chemical, etc.). How is the country and how are their families going to get any return on the $20,000 which the education of each of these youths represents?

Here we have about 250 advertising out-of-works and new graduates at $20,000 apiece representing an unprofitable investment of five millions of dollars, taking no count of the millions expended on those now in other countries.

Why perpetuate this accumulating folly? When the price of hogs goes down to a non-profit figure, the farmer quits raising hogs; farmer in Ontario are plowing in their strawberry beds; in the south they are demolishing cotton fields; in Brazil they are burning coffee. Is there no analogy?

FRANK WISE.

Montreal, July 18, 1932.

(Ex.—Toronto "Mail & Empire.")

Protection Of the Term "Engineer"

(Continued from Page 10)

jective is not secured and enforced, then our legislative effort has, in large measure, been in vain.

Without restriction of the designation "Engineer," proper enforcement of the licensing statutes is impeded or nullified. Since we cannot go into a man's private office and pry into his confidential relations with his clients, it is, as a rule, effectively difficult to prove that a man is practicing engineering. But it is easy to prove that he is using the professional designation: telephone directories, door signs, letter-heads, advertisements and business cards, supply at once the information and the evidence. Moreover, no statutory definition of the practice of professional engineering is or can be perfect. A client may want engineering service or advice not clearly covered by the statutory definition; if he is misled to bring his problem to some unqualified, self-styled "Consulting Engineer" or "Mechanical Engineer," the purpose of the licensing statute is frustrated. The most practical method of "giving teeth" to registration laws is through restriction of the professional designation. Otherwise, effective detection and prosecution of violations becomes practically impossible.

All members of the engineering profession are "Engineers." They have studied "Engineering," and they practice "Engineering." They are known to the public and to the profession as "Engineers." This professional designation is their bond of solidarity. Adjectives may mark differentiation into specialties or fields of practice, but the word "Engineer" unites all into a single profession. As the only designation that all members of the profession have in common, it should be protected from misappropriation and abuse.

As we live and work to enhance the prestige of the title "Engineer," we should at the same time exert our efforts to keep that title from being degraded by unauthorized and unqualified misappropriation.

(How this may be accomplished will be discussed in a subsequent article.)

* * *

A Phrophecy Recalled

(Continued from Page 5)

as a public enemy. Such an one must suffer the abuse that is the lot of all whose love of mankind has prompted them to become sincere crusaders. One need look no further than the gentle Nazarene to appreciate that sincerity and comprehension mean nothing to those who have benefited greatly from the abuses of a social, political or economic order.

Despite, however, the condemnation of many, who, possessed of sufficient of the world's goods, do not and cannot appreciate the position or understand the emotions of human beings sorely distressed in mind and body, it is a moral and patriotic duty to face the truth and to point out the ills that exist in the body social, and Dr. Crane's philosophy is today more easily appreciated than when it was first penned.

The present order of society represents but one of several epochs that the world has experienced, and from which it has heretofore emerged with some permanent, and more temporary, advantages to mankind. Pagan priestcraft, militarism, lawmaking and financiering have passed across the stage of human history, have been the object of human aspiration and have eventually subjugated human society to their dominion. The last of these must shortly give way as did its predecessors to the necessities of a changing civilization. Possession of property or wealth is after all but an effect, and no effect can perpetuate itself.

An epoch of engineering and science is inevitable and it is no more possible to restrain the tides of human aspira-

(Continued on Page 16)

LICENSE LAW (Continued from Page 9)

Shall have been engaged in the practice of engineering for at least 10 years, and shall have been in responsible charge of work for at least 5 years. Section 1452.	No change. Section 1452.	No change. Section 1451.
Shall be licensed professional engineers. Section 1452.	No change. Section 1452.	No change. Section 1451.
Appointment and Term of Membership: Shall be appointed by the regents for a term of 5 years. Section 1451.	**Appointment and Term of Membership:** No change. Section 1451.	**Appointment and Term of Membership:** Shall be appointed by the regents upon the recommendation of the commissioner of education for a term of 3 years; but this shall not affect the appointments nor the terms of present members. Section 1451.
Members shall hold over until their successors shall have been duly appointed and qualified. Section 1451.	No change. Section 1451.	No provision.
Removal for Cause: The regents may remove any member of the board for misconduct, incompetency, or neglect of duty. Section 1451.	**Removal for Cause:** No change. Section 1451.	**Removal for Cause:** No change. Section 1451.

Comment: The American Engineer commends the Board and especially Secretary Finch for this splendid compilation. Every practising engineer as well as every prospective engineer should read and file for future reference this memorandum. It will be well worth his while to do so.

(Continued in Next Issue)

Russia Reviewed By An Engineer

(Continued from Page 7)

there is the risk of taking them over the border. If one is found out, the penalty is severe. If a person buys them in Russia, and is a foreigner, he is likely to be deported. The Soviet citizen is severely punished, but in spite of this it is like our illicit trade in liquor. The elevator boy at the hotel, the chambermaid, people on the street —if they recognize one as a foreigner —stop him on some drummed-up excuse or other, such as a sick mother in Poland or brothers in Germany, and wants to trade Russian rubles for dollars, shillings or marks. Last Fall, it had grown so bad, one did not see how it was going to be stopped.

While the incentive of higher compensation has crept in, they try to counteract this by varying charges, namely: if you earn 100 rubles a month, a certain room that you pay rent for will be 6 rubles a month, and proportionately higher as your earnings increase. Opera seats are 6 rubles; but depending upon your earnings, there is a discount, which brings them down to 1 ruble 20 kopecks for the lowest pay. Similarly, you get permits to buy rubber shoes, boots or clothing, but the next thing is to find the articles; they are usually not in the stores and when they do come in there is a long line waiting and by the time you get there, everything has been sold. This condition is being improved, however, and last Fall the lines were not so long and there were more things available. A long time ago, Russia instituted a special store for foreigners, experts working there, in which they kept a pretty good stock of things at fairly reasonable prices. About a year ago they instituted a new idea. The three hotels in Moscow—the hotel itself and the restaurant have a scale of prices on the basis of voluta—gold or foreign currency and one can get almost anything at prices fairly reasonable. There is also a store "Torgsin" in Moscow in which one can buy anything from antiques and fur coats to caviar or meat, but a fur coat which costs 300 rubles there could not be procured in any store available to the Russian in Moscow, or if by some good chance it could, the quality would be inferior and the price 10,000 rubles, or so.

Official Russia is desperately in need of voluta—gold or foreign currency. This particular store and the hotels are just one of the developments in trying to sell things to foreigners for gold.

Of course at the rate of variation in earning power, one would inquire: "Suppose you earn more than you need, what do you do with it?" As far as I could ascertain, 5% of your earnings must be set aside for insurance, (old age, sickness, pensions); 10% is enforced voluntary purchase of Government Revolutionary Bonds. Then what you save, you can deposit in the Soviet Bank and get interest for it. In Russia, generally, it is dangerous to have a balance of over 1,000 rubles. Someone calls on you and you are either induced to buy more Revolutionary Bonds, or contribute towards the Five Year Plan, or perhaps explain how you got so much money. Very begrudgingly they have apparently recognized the capitalistic idea of the necessity of individual re ward as an incentive, even though they try afterwards to take it away. The effect of this is very evident. Either the Russians do not work so hard—it takes about three Russian workmen to do what one American would usually accomplish—or towards the end of the pay period, whatver surplus the Russian has, he starts to spend in the cinemas, amusement parks, or going to restaurants. One of the writer's Russian friends went two or three times a week, to the Savoy or Metropole Hotel in Moscow, where his meal cost him 20 to 25 rubles.

Human nature is a pretty uniform thing all over the world and while youthful enthusiasm and propaganda, together with fear, play some part in the thing, it is very evident that the need for rewarding industry and effort is slowly, in spite of their theory of Communism, making progress.

The general conception here is that there is no unemployment in Russia, and while there is a large roving and rolling population going from place to place and job to job, this is true; but when one considers the individual productive capacity and that it (roughly) takes three men to do what one man can do and the very low scale of living that results, it does not take much of a mathematician to see that under such a system we would not alone have no unemployment here, but could use double the population we have to accomplish the work even we are doing in this depression. It is all very evident then that for the Russian idea to work out, whether it be Communism, or State Capitalism, individual rewards must be commensurable with the man's usefulness to the community. Things are changing rapidly and there may be developed some way of inducing individuals to do their best and to refrain from consuming or squandering what they do not actually need, but until this is done at least part of their plan will not be a success. Another important element and a glaring flow is: that under the system where the government owns and operates everything, the improvements, innovations and betterments incident to individual competition disappear. Of course, Russia if she keeps going under her system, will, necessarily, become aware of new things, improvements developed by other countries, which stimulate individual ingenuity and ability—and thus have an opportunity to copy them—but if the Communistic system were universal, one is im-

pressed with the fact that the world would stop right where it is today. It would for the centuries in the future have and make such automobiles, tractors, radios and other things that it now has and tend, if anything, toward deterioration in quality and usefulness. The great power development at Dneiperstroy represents not the fulfilment of Russian engineering advance but has been borrowed from other countries, especially America. One cannot see that the Russian scheme of things contemplates anything, but that Dneiperstroy is the final word in hydro-electric development and will be so for centuries to come; and so with their tractor plants and automobile establishments and steel centers. Under the Russian system, new and more modern plants will not grow up in competition. There will be no incentive to make improvements or better products, or even something else that attains the object in view in a newer and entirely different way. Their system does not contemplate that this feature of ingenuity, invention and development will make shortly what they are now doing obsolete. One can see Russian tractors two years old on the Banks of the Volga. They are attempting to pull a load of a few hundred bricks up an enbankment. A team of horses could do better. They are very proud of their tractor and it is one of the first of their products. They bought the plans from a German concern, which probably had sold plans that the German factory had already discarded, having something better, so that under this part of their scheme unless here too, individual reward enters into the matter as an incentive, the Russian products will be inferior and obsolete in a short time. One is confident, however, that in working out their problems they will, necessarily, change to conform with the demands of human nature.

Many of the things that their system has developed are good and while originally of a highly theoretical nature have a practical interest and are a lesson to us, such as their Central Planning Bureau, "Gosplan." They are budgeting and arranging improvements and works years in advance through the ability of one central ownership and control to coordinate things.

The idea of all children being the concern of the State and that the care, rearing and education of them as future citizens is the State's duty; illness and old age pensions; the attempt to solve the domestic difficulties that have troubled the world for centuries—of making women economically independent of men are amongst their construction proposals. None of us who think has any doubt that in a state the male is principally useful for the generation in which he lives. The female is of importance, not alone for her generation, but for the generations that come, and nature has therefore endowed her with certain reactions and instincts which are better fitted to decide on progeny and the make-up of the physical and mental characteristics of populations yet unborn.

There is, of course, no such thing as "free speech" in Russia, nor is there a free press. The theoretical Communist, the type one finds here, who speaks from a soap box on the destruction of government or writes freely and enthusiastically on the brotherhood of mankind and the freedom from political restraint would not last twenty four hours in Russia. Individual thoughts and theories on politics or government policy have no place there. Superminds think for them and leave no choice to the individual.

There are practically no crimes of violence in Russia and outside of petty thievery, which is only lightly punished, everyone has the deepest respect for law and order. Moscow and Leningrad, together with other Russian cities, are more law-abiding and far safer than Chicago and New York. While this may be principally due to the Russian temperament—people being uniformly friendly and good natured—it is also due to the uniform system of justice which works rapidly and, there, the consequence of improper acts cannot be avoided by influence or other circumstances. Of course, there are, undoubtedly, many abuses of police power, but they are being eliminated. One of the writer's Russian friends of the secret police in Moscow told him last October that a reorganization was taking place and the heads of the secret police were going to lose their places and be punished for certain abuses. This is exactly what did happen a month or so later. It is amusing to recall an evening when one or two of them—after they had started to inquire about Al Capone and Legs Diamond, and not understand that they were gangsters and racketeers and enemies of the law, why the United States could not do something with them. A friend of the secret police told the writer that under their system they would just simply call on them after ten o'clock some night and they would not be with us in the morning.

While in Moscow two years ago, the President of the Moscow-Soviet—which includes not alone the City of Moscow, with four million people, but a large Province, disappeared from office and was eliminated because he had accepted corruption money. During the Czarist regime, official Russia was extremely corrupt. There is practically no corruption in official circles now.

Of course, there must be some merit and some reason for a system carrying on for twelve years as has the Soviet Government of Russia. If you look at it from the Russian point of view, you will realize that the bulk of the people—the 90 per cent or more who had no opportunity under the old regime, now have at least the hope of equal opportunity.

Education is universal and jobs are waiting for all those who finish their education for a profession or other calling.

On the religious question, one must bear in mind that the Russian Orthodox Church was part of the Czarist State, with the Czar as the head of it, and that, undoubtedly, during the centuries one of its missions, if not the principal one, had to do with the maintenance of the absolute monarchy, so that when Lenin said "Religion is the opium of the people" he could not have meant anything other than what he knew of the religion which was the Russian Orthodox Church. One must admit that the Soviet experiment could not have carried on with any chance of success if it permitted the former Czarist State Church of Russia to continue its influence over the people.

In my opinion, the Soviet Republic will continue and succeed, modified however very considerably from what it is today. It is really no longer communistic. It is capitalistic, but the capital belongs to the State. It is seeking to stimulate individual effort by the well-known device of money and rewards and it will have just as great an effect on the governments of the rest of the world as the French Revolution had in its day. It will probably help to accelerate the action of capitalistic states such as ours, in correcting at least some of the abuses of capitalism, and will secure the incentive of reward to individual qualities that serve to return to the general welfare the products of ingenuity, industry, frugality and self-restraint, instead of permitting as is now the case shrewdness, double dealing and dishonesty to absorb the fruits of human endeavor.

* * *

A Phrophecy Recalled

(Continued from Page 14)

tion and necessity than it is to turn back the moving finger of time. The author quoted above is on the whole right, notwithstanding the critical comments so much in evidence today regarding certain engineering executives in High Public Office. Whatever may be said of the present incumbent of the Presidency, no man can honestly contend that his policies or reasoning processes have been those of an engineer. Unhappily for the times one is compelled to see in his every action the financier of the passing order rather than the engineer of the approaching one. With the insight and imagination of a poet Dr. Crane has visualized the epoch now at hand. Whether it is to be the best or worst mankind has experienced, rests largely with the engineer himself. If he can but humanize his endeavors and avoid the mistakes of those who confuse any compilation of opinion with natural law and who seek to endow human concepts and institutions with divine immutability he may survive longer and with greater benefit to humanity than his predecessors in the seat of mankind's ever changing but seemingly indispensible oligarchy. To him nothing is science unless it is capable of absolute demonstration. All else belongs in the realm of speculative philosophy and the conclusions of the best and worst are after all merely opinions until proven by those principles which the engineer, better than any other, knows how to apply. Over and above all must he separate the physical from the spiritual and, knowing one and believing the other, seek to reconcile a civilization changed by science with a human nature unchanged by the centuries.

ENGENIEUR.

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For an organization such as ours, with a widely scattered membership whose contact depends almost entirely upon the written word, a medium such as THE AMERICAN ENGINEER is almost essential. Heretofore, information and announcements reaching our members have been limited to the expensive and entirely inadequate system of occasional circularization by mail. Now, through the cooperation of the New York State Society of Professional Engineers we have a monthly forum that will not only be a vehicle for official Association announcements, but will reflect Chapter and individual activities which the circular system did not permit.

Of course, the cost of making each one of our members a paid subscriber, even at the advantageous rate accorded us by THE AMERICAN ENGINEER, will present a drain on the dues paid. But it will also, and in greater proportion, increase the Association's effectiveness, and, we hope, prove to be worthy of general approval. If so, we feel confident that the members will combat a possible financial deficit by working to increase our membership.

In according us a workable subscription rate, THE AMERICAN ENGINEER naturally looks to the increased circulation which membership affords, to attract additional advertising. We, therefore commend its advertisements to the attention of our members, and if you act upon them, make mention of THE AMERICAN ENGINEER.

Members are urged to support and actively co-operate with the Association in this new step forward, enabling us to bring to the members of the Association, items closely associated with the Association, the doings of the Chapters and legislative matters of interest to the profession.

HUGH A. KELLY, Secretary.

— MEMBERSHIP BLANK —

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1932–1933

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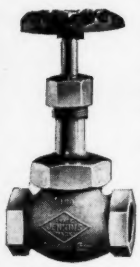

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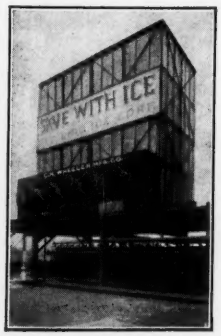

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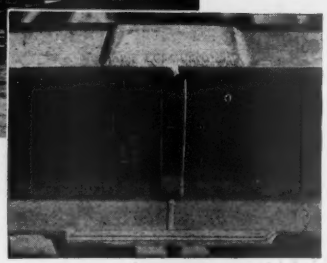

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